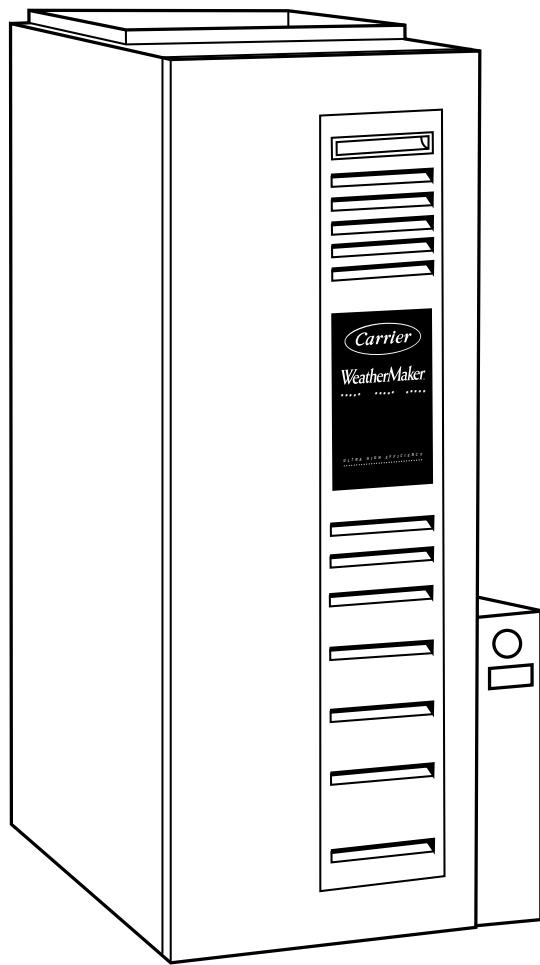




Product Data

58MXA Highly-Efficient 4-Way Multipoise Fixed-Capacity Direct-Vent Deluxe Condensing Gas Furnace

Series 140 & 150
Input Capacities: 40,000 thru 138,000 Btuh



4-Way Multipoise Design Allows More Applications . . .

The model 58MXA is a must for your product line. This high-efficiency furnace allows more applications with its reliable 4-way multipoise design. The model 58MXA is available in 12 heat/airflow combinations and with the 4-way multipoise design can be installed in upflow, downflow, or horizontal positions covering up to 48 different applications. With the exception of the 140 size unit, all 58MXA models can be installed in a manufactured (mobile) home when the optional kit is used. The furnace is factory configured for upflow application.

This versatile unit utilizes hot surface ignition (HSI) which ignites the burners directly. HSI eliminates gas waste that typical continuous-pilot designs can bring. Hot surface ignition provides reliable start-up and operation.

Take a look at the control center on model 58MXA. Control of ignition, inducer, and blower operation is all handled in 1 central printed circuit board. The status indicator on the control signals when a fault has occurred and identifies where the problem is. This, along with the component test feature, makes the 58MXA one of the easiest gas furnaces to troubleshoot.

High efficiency is achieved by maximizing heat transfer. The model 58MXA uses 100 percent outdoor air for combustion in a sealed-combustion system. The result is energy-saving efficiency, up to 95.5 percent (Pg. 12) Annual Fuel Utilization Efficiency (AFUE), and reduced operational noise. The model 58MXA is one of the quietest furnaces in the industry.

A unique feature of this unit is the patented polypropylene-laminated heat exchanger. This secondary heat

exchanger ensures that all available heat is properly transferred to the airstream and throughout the home. Using the exclusive flow-through design, the secondary heat exchanger reduces the pressure drop in the furnace which leads to lower electrical usage, an important part of this unit's efficiency. Carrier heat exchangers are backed by a Limited Lifetime Warranty. (See Warranties section for details.)

When we put it all together, the model 58Mxa combines quality and design to bring high efficiency and comfort. You will enjoy the versatility and ease of installation of this unit. The model 58Mxa is equipped for either left- or right-side connections. Blower speeds are easily adjustable with speed-taps conveniently located on the control center. An updated, more efficient combustion inducer allows for more use of 2-in. vent and combustion-air piping, keeping installation costs low.

As with other Carrier furnaces, this model is designed to work as a part of the total home comfort system which includes elements for cooling, air cleaning, humidification, ventilation, and zoning.

58Mxa Features/ Benefits

Casing — One piece, seamless wrap-around construction of heavy, galvanized steel resists corrosion.

Media Filter Cabinet — Enhanced indoor air quality in your home is made easier with our media filter cabinet—a standard accessory on all Deluxe furnaces. When installed as a part of your system, this cabinet allows for easy and convenient addition of a Carrier high-efficiency air filter.

Insulated Blower Compartment — The acoustical insulation reduces air and motor noise to promote quiet operation.

Certifications — The 58Mxa units are A.G.A. and C.G.A. design certified for use with natural and propane gases. The furnace is factory-shipped for use with natural gas. An A.G.A./C.G.A. listed gas conversion kit is required to convert furnace for use with propane gas. The efficiency is GAMA efficiency rating certified. The 58Mxa meets California Air Quality Management District emission requirements. Except for the 140 size unit, all 58Mxa models can be installed in a manufactured (mobile) home when the optional kit is used.

Warranties — Limited Lifetime Warranty on the heat exchangers for the lifetime of original owner in single family residence; 20 years in other residential and commercial applications. Three-year Limited Warranty on microprocessor control, HSI, and inducer motor. One year Limited Warranty on entire unit. Contact your dealer for details.

Combustion Products Venting — The combustion-air and vent pipes can terminate through a side wall or through the roof when used with a factory-authorized vent termination kit.

Blower Access Panel Switch — Shuts off all 115-v power through furnace components whenever blower access panel is opened.

Hot Surface Ignitor — No pilot flame to waste gas or cause problems.

Slow Opening Redundant Gas Valve — Shuts off gas to burners if 1 of the valves fails to close completely for any

reason. The slow opening feature reduces start-up noise from rapid ignition.

Quality Registration — The 58Mxa is engineered and manufactured under an ISO 9001 registered quality system.

Insulation — Foil-faced insulation in heat exchanger section of the casing minimizes heat loss.

Control Center — Microprocessor controls sequencing and furnace operation. Equipped with a component test feature and status indicator light to assist in troubleshooting. Selectable micro-processor blower control times blower start after main burners ignite to eliminate cold air blowing into rooms.

Adjustable Blower Speed — For precise airflow selection of heating or cooling operation.

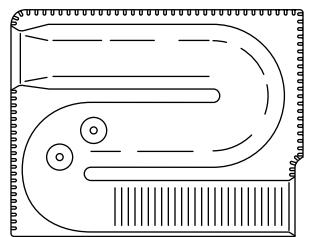
Direct-Vent Sealed Combustion System — Model 58Mxa uses 100 percent outdoor air, which results in especially quiet operation. Direct venting minimizes the possibility of chloride contamination which can result in heat exchanger corrosion. Direct venting also reduces air infiltration into the home.

Monoport Burners — The burners are finely tuned for smooth, quiet combustion plus economical gas usage.

Serpentuff™ — Exclusive Serpentuff coating, a patented polypropylene laminate is used on the secondary heat exchanger.

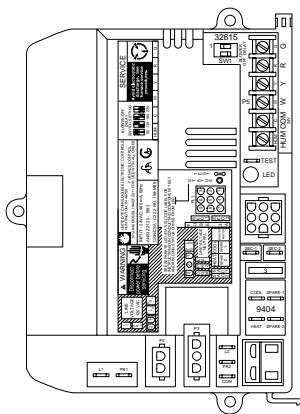
Bottom Closure — Factory-installed for side return; easily removable for bottom return.

Filter — Cleanable filter with retainer is standard.



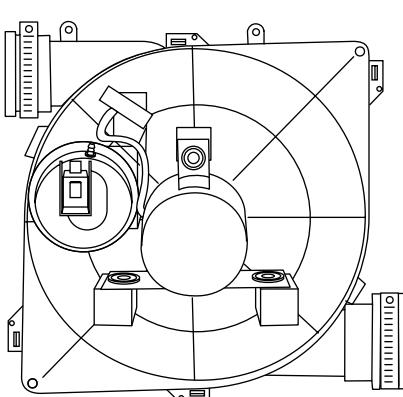
A92505

HEAT EXCHANGERS



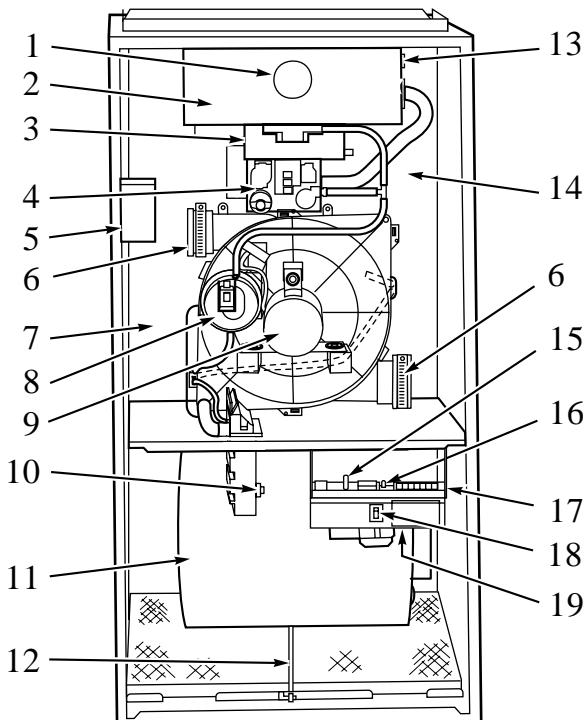
A94151

CONTROL CENTER



A94152

INDUCER ASSEMBLY



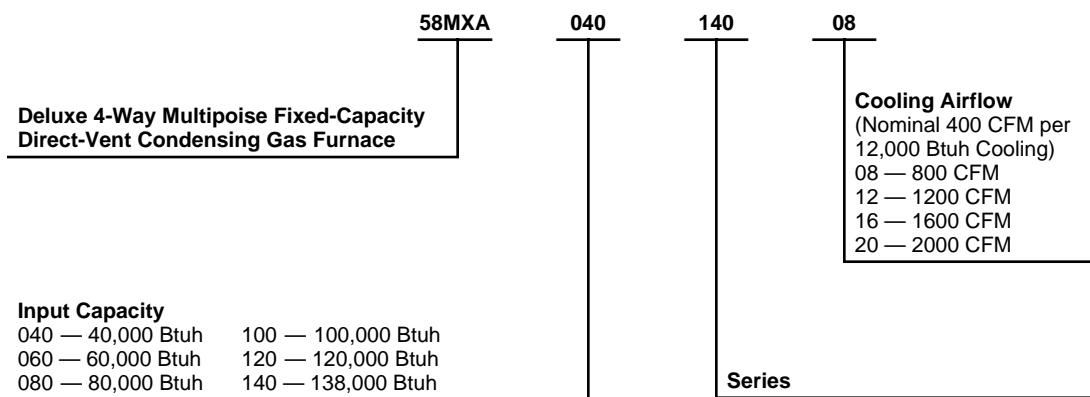
A98292

NOTES:

1. The 58MXA Furnaces are for use with natural gas, but can be field converted for propane gas with a factory-authorized and listed accessory conversion kit.
2. Component location and configuration may be different than shown above.

- 1 Burner sight glass for viewing burner flame.
- 2 Burner assembly (inside), operates with energy-saving, inshot burners and hot surface ignitor for safe, dependable heating.
- 3 Combustion-air intake connection to ensure contaminant-free air (right or left side).
- 4 Redundant gas valve, safe, efficient, features 1 gas control with 2 internal shutoff valves.
- 5 Junction box for 115-v electrical power supply.
- 6 Vent outlet uses sealed PVC pipe to carry vent gases from the furnace's combustion system (right or left side).
- 7 Secondary condensing heat exchanger (inside), wrings out more heat through condensation of gases. Constructed with Polypropylene-laminated steel to ensure durability.
- 8 Pressure switch ensures adequate flow of flue products through furnace and out vent system.
- 9 Inducer motor pulls hot flue gases through the heat exchangers, maintaining negative pressure for added safety.
- 10 Condensate drain connection collects moisture condensed during the combustion process.
- 11 Heavy-duty blower circulates air across the heat exchangers to transfer heat into the home.
- 12 Air filter and retainer may be used for side return application.
- 13 Rollout switch (manual reset) to prevent overtemperature in burner area.
- 14 Primary serpentine heat exchanger (inside). Stretches fuel dollars with the S-shaped heat-flow design. Solid weld-free construction of corrosion-resistant aluminized steel means reliability.
- 15 3-amp fuse provides electrical and component protection.
- 16 Light emitting diode (LED) on control center. Code lights are for diagnosing furnace operation and service requirements.
- 17 Control center.
- 18 Blower access panel safety interlock switch.
- 19 Transformer (24v) behind control center provides low-voltage power to furnace control center and thermostat.

Model number nomenclature



MEETS DOE RESIDENTIAL
CONSERVATION SERVICES
PROGRAM STANDARDS

Before purchasing this appliance,
read important energy cost and
efficiency information available
from your retailer.



As an ENERGY STAR®
Partner, Carrier
Corporation has
determined that this
product meets the
ENERGY STAR®
guidelines for energy
efficiency.



REGISTERED QUALITY SYSTEM

These products are engineered and
manufactured under an ISO 9001 registered
quality system.

Physical data

UNIT SIZE	040-08	040-12	060-08	060-12	060-16	080-12	080-16	080-20	100-16	100-20	120-20	140-20
OUTPUT CAPACITY BTUH* (ICS) (Shaded capacities are specified on rating plate)	Upflow	38,000	38,000	56,000	56,000	56,000	75,000	75,000	94,000	94,000	113,000	129,000
	Downflow	38,000	38,000	56,000	56,000	56,000	75,000	75,000	94,000	94,000	113,000	129,000
	Horizontal	38,000	38,000	56,000	56,000	56,000	74,000	75,000	93,000	93,000	112,000	128,000
INPUT BTUH†	40,000	40,000	60,000	60,000	60,000	80,000	80,000	80,000	100,000	100,000	120,000	138,000
SHIPPING WEIGHT (Lb)	149	152	156	163	166	172	175	197	193	196	252	252
CERTIFIED TEMP RISE RANGE (°F)	30—60	15—45	45—75	30—60	20—50	40—70	30—60	20—50	45—75	30—60	40—70	50—80
CERTIFIED EXT STATIC PRESSURE (In. wc)	Heating	0.10	0.10	0.12	0.12	0.15	0.15	0.15	0.20	0.20	0.20	0.20
	Cooling	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
AIRFLOW CFM‡	Heating	850	1125	885	1065	1320	1190	1285	1785	1315	1690	1720
	Cooling	895	1215	900	1200	1545	1245	1525	1925	1570	1930	2000
LIMIT CONTROL	SPST											
HEATING BLOWER CONTROL (Off Delay)	Selectable 90, 135, 180, or 225 Sec											
BURNERS (Monoport)	2	2	3	3	3	4	4	4	5	5	6	6
GAS CONNECTION SIZE	1/2-in. NPT											
GAS VALVE (Redundant) Manufacturer	White-Rodgers											
Minimum Inlet Pressure (In. wc)	4.5 (Natural Gas)											
Maximum Inlet Pressure (In. wc)	13.6 (Natural Gas)											
IGNITION DEVICE	Hot Surface											

* Capacity in accordance with U.S. Government DOE test procedures.

† Gas input ratings are certified for elevations to 2000 ft. For elevations above 2000 ft, reduce ratings 2% for each 1000 ft above sea level. In Canada, derate the unit 5% for elevations 2000 to 4500 ft above sea level.

‡ • Airflow shown is for bottom only return-air supply with factory supplied 1-in. washable filter(s).
 • For air delivery above 1800 CFM, see Air Delivery table for other options.
 • An airflow reduction of up to 7% may occur when using the factory-specified 4 5/16-inch wide, high efficiency media filter.
 • For best furnace efficiency when using the 4 5/16-inch wide media filter, adjust the blower speed tap to near the mid-point of the rise range.

ICS—Isolated Combustion System;

Carrier accessories*

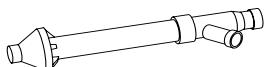
UNIT SIZE	040-08 040-12	060-08 060-12 060-16	080-12 080-16 080-20	100-16 100-20	120-20	140-20
GAS CONVERSION KIT — NATURAL-TO-PROPANE				KGANP2001ALL		
GAS CONVERSION KIT — PROPANE-TO-NATURAL				KGAPN1601ALL		
TWINNING KIT (Upflow Only)	N/A		KGATW0401HSI†		N/A	
MANUFACTURED (Mobile) HOME KIT			KGAMH0101KIT			N/A
DOWNFLOW BASE (For Combustible Floors)‡			KGASB0201ALL			
VENT TERMINATION KIT (Bracket Only for 2 Pipes)			2-in. — KGAVT0101BRA	3-in. — KGAVT0201BRA		
CONCENTRIC TERMINATION KIT (Single Exit)			2-in. — KGAVT0501CVT	3-in. — KGAVT0601CVT		
CONDENSATE FREEZE PROTECTION KIT			KGAHT0101CFP			
ELECTRONIC AIR CLEANER (EAC)			Model AIRA			
MECHANICAL AIR CLEANER			Model 31MF or MACA			
HUMIDIFIER			Models HUM			
HEAT RECOVERY VENTILATOR			Model HRV			
ENERGY RECOVERY VENTILATOR			Model ERV			
THERMOSTAT — NON-PROGRAMMABLE			For Use with 1-Speed Air Conditioner — TSTATCCNAC01-B For Use with 2-Speed Air Conditioner — TSTATCCN2S01-B For Use with 2-Speed Heat Pump — TSTATCCN2S01-B			
THERMOSTAT — PROGRAMMABLE			For Use with 1-Speed Air Conditioner — TSTATCCPAC01-B For Use with 2-Speed Air Conditioner — TSTATCCP2S01-B For Use with 1-Speed Heat Pump — TSTATCCPDF01-B For Use with 2-Speed Heat Pump — TSTATCCP2S01-B or TSTATCCPDF01-B			
THERMIDISTAT — PROGRAMMABLE/ NON-PROGRAMMABLE THERMOSTAT W/Humidity Control			TSTATCCPRH01-B			
ZONING — 2 ZONE			ZONECC2KIT01-B, ZONEKIT2ZCAR			
ZONING — 4 ZONE			ZONECC4KIT01-B			
ZONING — 8 ZONE			ZONECC8KIT01-B			

* Factory-authorized and field-installed. Gas conversion kits are A.G.A./C.G.A. recognized.

† For 16 and 20 airflow sizes only (except 140-20 size unit) and in upflow application ONLY. See kit Installation Instructions for details.

‡ Required for installation on combustible floors when no coil box is used, or when any coil box other than a Carrier cased coil is used.

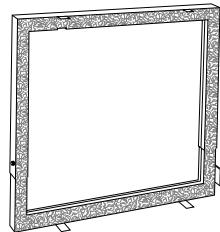
N/A—Not Applicable



A93086
CONCENTRIC VENT

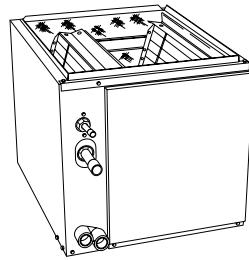
A concentric vent kit allows vent and combustion-air pipes to terminate through a single exit in a roof or side wall.

One pipe runs inside the other allowing venting through the inner pipe and combustion air to be drawn in through the outer pipe.



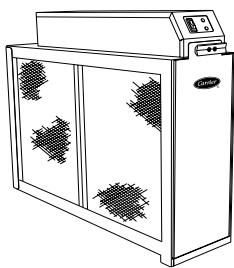
A88202
DOWNFLOW SUBBASE

One base fits all furnace sizes. The base is designed to be installed between the furnace and a combustible floor when no coil box is used or when a coil box other than a Carrier cased coil is used. It is A.G.A./C.G.A. design certified for use with Carrier 58Mxa furnaces when installed in downflow applications.



A96214
CK5 CASED COIL (as shown)

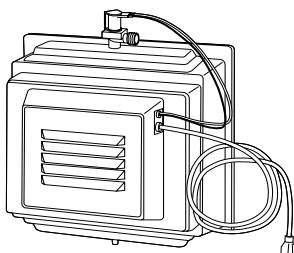
The CD5 or CK5 Cased Coil is an upflow/downflow furnace coil which can also replace the downflow subbase when installing the 58Mxa on combustible flooring in the downflow orientation.



A97152
ELECTRONIC OR MECHANICAL AIR CLEANER

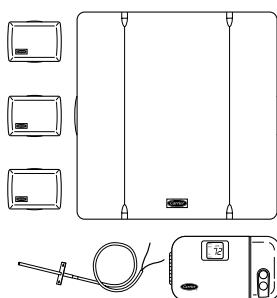
Cleans the air of smoke, dirt, and many pollens commonly found. Saves decorating and cleaning expenses by keeping carpets, furniture, and drapes cleaner.

Electronic air cleaner is shown.



A95248
HUMIDIFIER

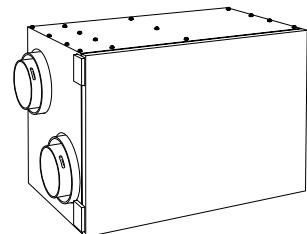
By adding moisture to winter-dry air, a Carrier humidifier can often improve comfort and keeps woodwork, wallpaper, and paint in better condition. Moisturizing household air also helps to retain normal body heat and provides comfort at lower temperatures.



A97432
CONTROLS: THERMOSTATS AND ZONING

Available in programmable and non-programmable models, Carrier thermostats maintain a constant, comfortable temperature level in the home.

For the ultimate in home comfort, Carrier's 2, 4 and 8-zone systems allow temperature control of individual "zones" of the home. This is accomplished through a series of electronic dampers and remote room sensors. The 4-zone system is shown.

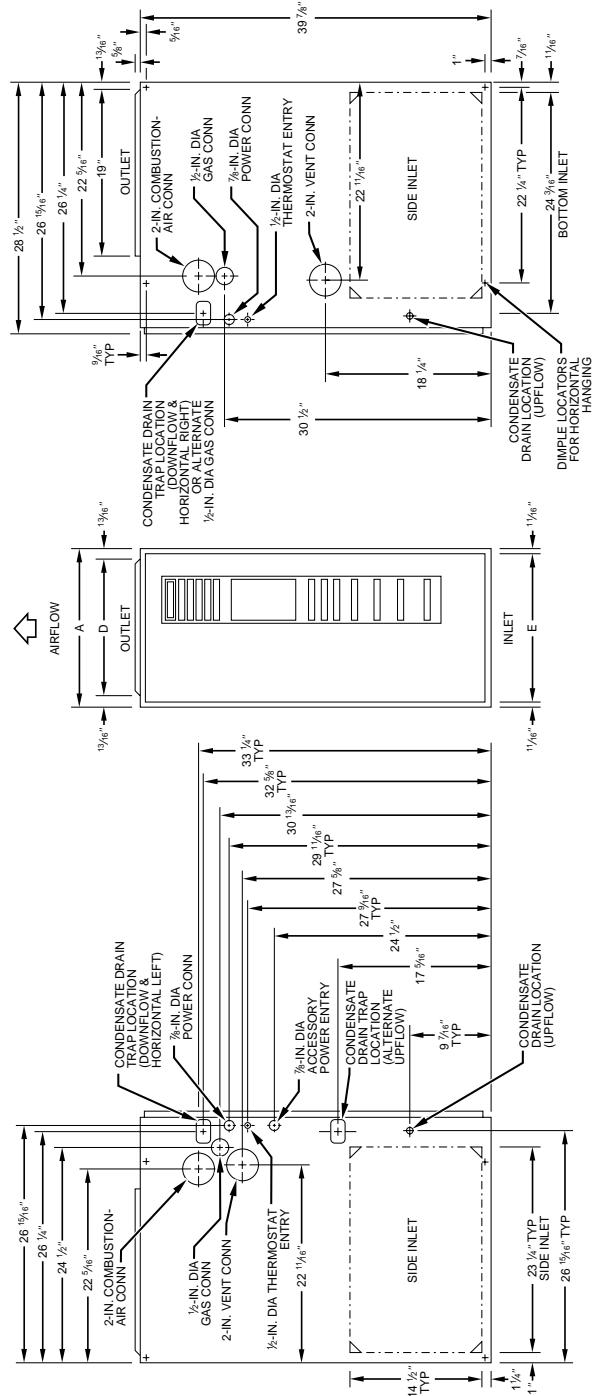


A94336
ENERGY/HEAT RECOVERY VENTILATOR

Carrier's energy or heat recovery ventilators exhaust stale indoor air and provide fresh outdoor air to the home while minimizing heat loss and humidity level. Especially useful for today's tighter constructed houses.

Energy recovery ventilator is shown.

Dimensions



NOTES: Minimum return-air opening at furnace, based on metal duct. If flex duct is used, see flex duct manufacturer's recommendation for equivalent diameters.

1. For 800 CFM—16-in. round or 14-1/2" X 12-in. rectangle.
2. For 1200 CFM—20-in. round or 14-1/2" X 19-1/2 in. rectangle.
3. For 1600 CFM—22-in. round or 14-1/2" X 23-1/4 in. rectangle.
4. For airflow requirements above 1800 CFM, see Air Delivery Table in Product Data literature for specific use of single side inlets. The use of both side inlets, a combination of 1 side and the bottom, or the bottom only will ensure adequate return-air openings for airflow requirements above 1800 CFM.

A98568

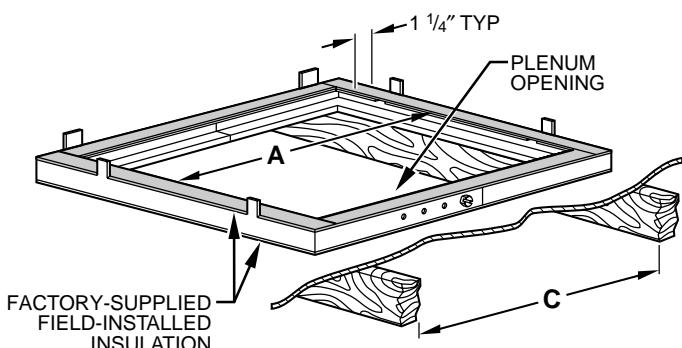
DIMENSIONS (In.)

UNIT SIZE	A	D	E
040-08	17-1/2	15-7/8	16
040-12	17-1/2	15-7/8	16
060-08	17-1/2	15-7/8	16
060-12	17-1/2	15-7/8	16
060-16	17-1/2	15-7/8	16
080-12	17-1/2	15-7/8	16
080-16	17-1/2	15-7/8	16
080-20	21	19-3/8	19-1/2
100-16	21	19-3/8	19-1/2
100-20	21	19-3/8	19-1/2
120-20	24-1/2	22-7/8	23
140-20	24-1/2	22-7/8	23

DOWNFLOW SUBBASE — DIMENSIONS (In.)

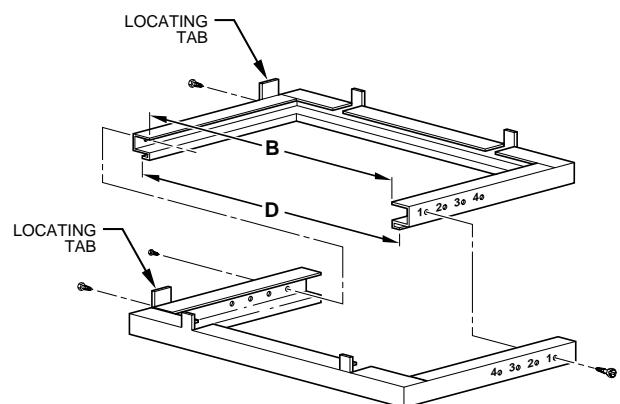
FURNACE CASING WIDTH	FURNACE IN DOWNFLOW APPLICATION	PLENUM OPENING*		FLOOR OPENING		HOLE NO. FOR WIDTH ADJUSTMENT
		A	B	C	D	
17-1/2	Furnace with or without CD5 or CK5 Coil Assembly or KCAKC Coil Box	15-1/8	19	16-3/4	20-3/8	3
21	Furnace with or without CD5 or CK5 Coil Assembly or KCAKC Coil Box	18-5/8	19	20-1/4	20-3/8	2
24-1/2	Furnace with or without CD5 or CK5 Coil Assembly or KCAKC Coil Box	22-1/8	19	23-3/4	20-3/8	1

* The plenum should be constructed 1/4 in. smaller in width and depth than the plenum dimensions shown above.



A97427

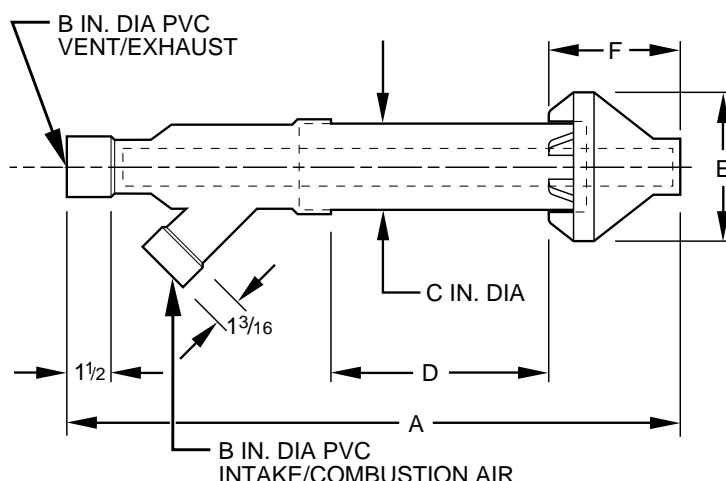
Assembled



A88207

Disassembled

CONCENTRIC VENT



A97110

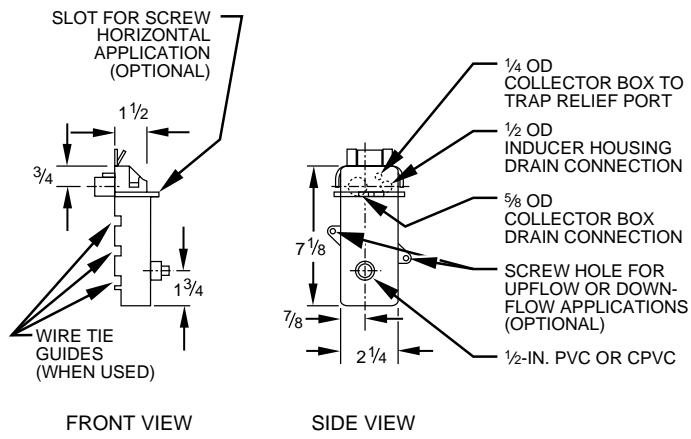
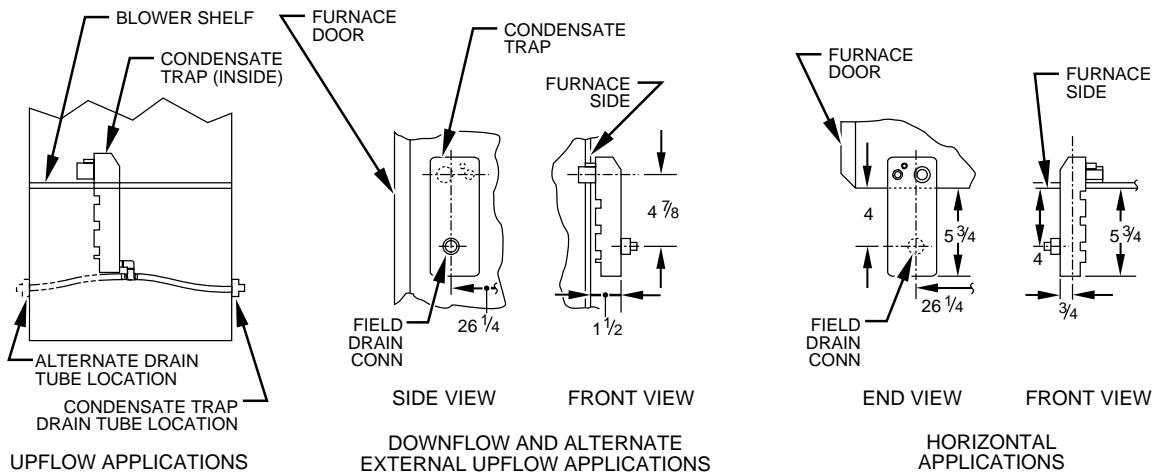
DIMENSIONS (In.)

KIT PART NO.	A*	B	C	D†	E	F
KGAVT0501CVT	33-3/8	2	3-1/2	16-5/8	6-1/4	5-3/4
KGAVT0601CVT	38-7/8	3	4-1/2	21-1/8	7-3/8	6-1/2

* Dimension A will change accordingly as dimension D is lengthened or shortened.

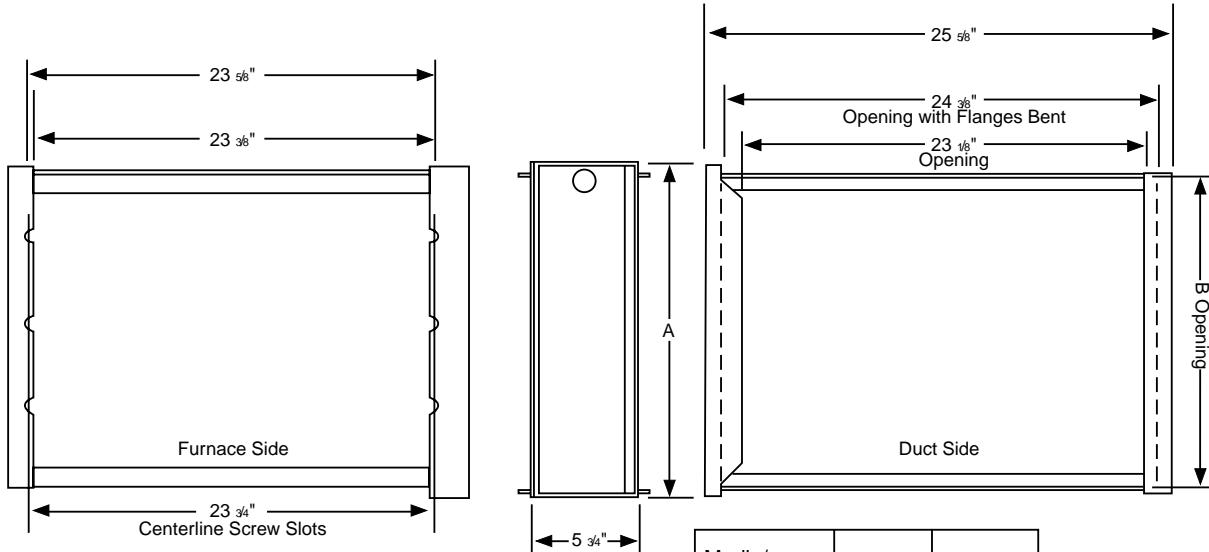
† Dimension D may be lengthened to 60 in. maximum. Dimension D may also be shortened by cutting the pipes provided in the kit to 12 in. minimum.

CONDENSATE TRAP



A93026

MEDIA FILTER CABINET



Media/ Filter Cabinet	A	B
16"	17	16"
20"	21	20"
24"	25	24"

A00309

Clearance to combustibles

This forced air furnace is equipped for use with natural gas at altitudes 0 - 10,000 ft (0 - 3,050m), except 140 size Furnaces are only approved for altitudes 0 - 7,000 ft. (0 - 2,135m).

An accessory kit, supplied by the manufacturer, shall be used to convert to propane gas use or may be required for some natural gas applications.

This furnace is for indoor installation in a building constructed on site. This furnace may be installed in a manufactured (mobile) home when stated on rating plate and using factory authorized kit.

This furnace may be installed on combustible flooring in alcove or closet at minimum clearance from combustible material.

This appliance requires a special venting system. Refer to the installation instructions for parts list and method of installation. This furnace is for use with schedule-40 PVC, PVC-DWV, or ABS-DWV pipe, and must not be vented in common with other gas-fired appliances. Construction through which vent/air intake pipes may be installed is maximum 24 inches (600 mm), minimum 3/4 inches (19 mm) thickness (including roofing materials).

**MINIMUM INCHES CLEARANCE
TO COMBUSTIBLE CONSTRUCTION**

ALL POSITIONS:

- * Minimum front clearance for service 30 inches (762mm).
- † 140 size furnaces require 1 inch back clearance to combustible materials.

DOWNFLOW POSITIONS:

† For installation on combustible floors only when installed on special base No. KGASB0201ALL, Coil Assembly, Part No. CD5 or CK5, or Coil Casing, Part No. KCAKC.

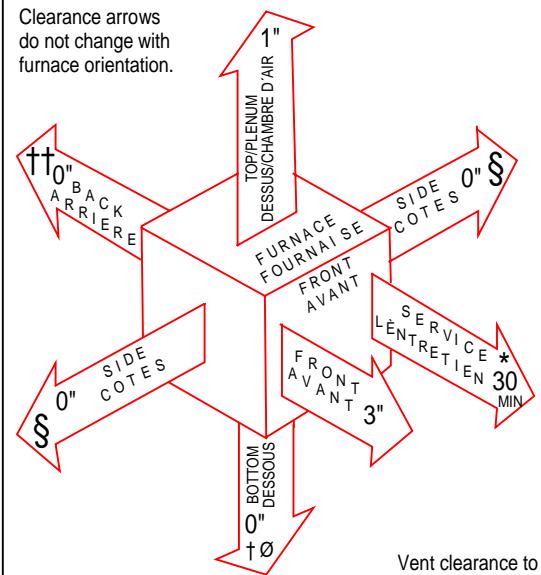
HORIZONTAL POSITIONS:

- Clearance shown is for air inlet and air outlet end.
 - Line contact is permissible only between lines formed by intersections of top and two sides of furnace jacket, and building joists, studs, or framing.
- Ø 120 and 140 size Furnaces require 1 in. bottom clearance to combustible materials.

324999-201 TOP REV. B

This furnace is approved for UPFLOW, DOWNFLOW and HORIZONTAL installations.

Clearance arrows do not change with furnace orientation.



Clearance in inches

Vent clearance to combustibles 0".

A97609

Performance data

UNIT SIZE	040-08	040-12	060-08	060-12	060-16	080-12	080-16	080-20	100-16	100-20	120-20	140-20
DIRECT-DRIVE MOTOR Hp (PSC)	1/5	1/3	1/5	1/3	1/2	1/3	1/2	3/4	1/2	3/4	3/4	3/4
MOTOR FULL LOAD AMPS	4.9	5.8	4.9	5.8	7.9	5.8	7.9	11.1	7.9	11.1	11.1	11.1
RPM (Nominal) — SPEEDS	1075—3	1075—4	1075—3					1075—4				
BLOWER WHEEL DIAMETER X WIDTH (In.)	10 x 6	10 x 7	10 x 6	10 x 7	11 x 8	10 x 7	11 x 8	11 x 10	11 x 8	11 x 10	11 x 10	11 x 10
FILTER SIZE (In.) — (Washable)												

PSC—Permanent Split Capacitor

EFFICIENCY

UNIT SIZE	040-08	040-12	060-08	060-12	060-16	080-12	080-16	080-20	100-16	100-20	120-20	140-20	
CAPACITY* (ICS)	Upflow	38,000	38,000	56,000	56,000	56,000	75,000	75,000	75,000	94,000	94,000	113,000	129,000
(Shaded capacities are specified on rating plate)	Downflow	38,000	38,000	56,000	56,000	56,000	75,000	75,000	75,000	94,000	94,000	113,000	129,000
	Horizontal	38,000	38,000	56,000	56,000	56,000	74,000	75,000	75,000	93,000	93,000	112,000	128,000
AFUE%*	Upflow	94.3	95.5	93.1	93.1	93.1	93.1	93.1	93.1	93.1	93.1	93.1	92.6
	Downflow	92.9	94.0	91.7	91.7	91.7	91.7	91.7	91.7	91.7	91.7	91.7	91.2
Nonweatherized ICS	Horizontal	93.7	94.9	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.0

* Capacity and AFUE in accordance with U.S. Government DOE test procedures effective November 10, 1997.

ICS—Isolated Combustion System

AIR DELIVERY—CFM (With Filter)*

UNIT SIZE	RETURN-AIR SUPPLY	SPEED	EXTERNAL STATIC PRESSURE (In. wc)							
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8
040-08	1 side or bottom	High Med-Low Low	1075 850 740	1040 825 700	995 780 650	945 740 620	895 685 565	840 635 515	760 560 455	670 480 385
040-12	1 side or bottom	High Med-High Med-Low Low	1470 1315 1125 930	1415 1280 1110 925	1400 1235 1085 910	1285 1180 1045 850	1215 1115 990 830	1120 1035 915 770	995 930 830 705	890 825 740 635
060-08	1 side or bottom	High Med-Low Low	1100 890 745	1065 865 710	1005 810 670	945 765 625	900 705 565	805 620 505	730 540 425	610 475 360
060-12	1 side or bottom	High Med-High Med-Low Low	1430 1270 1070 915	1375 1260 1055 895	1325 1215 1045 885	1275 1160 1015 865	1200 1105 975 840	1135 1035 920 800	1040 950 850 720	935 850 750 650
060-16	1 side or bottom	High Med-High Med-Low Low	1700 1500 1325 1205	1695 1465 1295 1170	1640 1435 1265 1145	1580 1385 1230 1110	1545 1355 1190 1080	1450 1300 1150 1035	1380 1250 1105 1035	1310 1185 1050 950
080-12	1 side or bottom	High Med High Med-Low Low	1535 1395 1200 1040	1470 1350 1175 1020	1405 1300 1125 990	1330 1225 1065 960	1245 1155 1030 910	1160 1080 970 860	1065 985 890 785	935 880 780 680
080-16	1 side or bottom	High Med-High Med-Low Low	1750 1495 1310 1135	1685 1455 1260 1105	1635 1405 1225 1075	1575 1355 1170 1040	1525 1305 1125 995	1445 1250 1095 995	1380 1185 1040 910	1310 1120 980 860
080-20	1 side or bottom	High Med-High Med-Low Low	2200 2100 1815 1560	2175 2025 1760 1555	2085 1945 1720 1515	2025 1865 1670 1460	1925 1785 1620 1435	1820 1700 1550 1390	1735 1620 1480 1340	1635 1540 1405 1270
	both sides or 1 side and bottom	High Med-High	2360 1965	2280 1925	2210 1870	2130 1830	2035 1760	1960 1710	1875 1670	1790 1575
100-16	1 side or bottom	High Med-High Med-Low Low	1740 1500 1340 1195	1705 1470 1315 1175	1660 1445 1300 1165	1615 1410 1270 1130	1570 1375 1235 1100	1500 1330 1200 1070	1425 1280 1140 1030	1355 1210 1095 975
100-20	1 side or bottom	High Med-High Med-Low Low	2250 2020 1725 1490	2175 1950 1690 1480	2090 1900 1660 1460	2020 1840 1630 1440	1930 1790 1575 1380	1855 1710 1520 1340	1760 1640 1460 1295	1670 1545 1370 1230
	both sides or 1 side and bottom	High Med-High	2360 1960	2315 1940	2265 1930	2200 1900	2130 1850	2055 1800	1965 1740	1890 1660
120-20	bottom only	High Med-High Med-Low Low	2350 2100 1770 1545	2250 2015 1720 1520	2160 1955 1675 1465	2070 1875 1620 1415	2000 1810 1575 1365	1885 1710 1515 1325	1790 1650 1450 1265	1635 1540 1365 1185
	both sides or 1 side and bottom	High Med-High	2435 2040	2360 2000	2285 1950	2220 1905	2130 1835	2050 1790	1965 1725	1875 1650
	1 side only	High Med-High	2255 1985	2190 1930	2115 1890	2045 1840	1965 1780	1890 1720	1800 1645	1710 1560
140-20	bottom only	High Med-High Med-Low Low	2285 2020 1675 1460	2210 1970 1650 1445	2140 1920 1620 1430	2065 1870 1590 1400	1990 1805 1560 1370	1910 1730 1510 1320	1830 1660 1450 1275	1745 1590 1390 1230
	both sides or 1 side and bottom	High Med-High	2310 1975	2255 1945	2185 1900	2120 1860	2045 1835	1965 1775	1880 1720	1800 1640
	1 side only	High Med-High	2140 1930	2080 1850	2025 1800	1945 1740	1875 1725	1795 1660	1725 1580	1625 1495

‡ • Airflow shown is for bottom only return-air supply with factory supplied 1-in. washable filter(s).
 • For air delivery above 1800 CFM, see Air Delivery table for other options.
 • An airflow reduction of up to 7% may occur when using the factory-specified 4 5/16-inch wide, high efficiency media filter.
 • For best furnace efficiency when using the 4 5/16-inch wide media filter, adjust the blower speed tap to near the mid-point of the rise range.

Combustion-air and vent piping

MAXIMUM ALLOWABLE PIPE LENGTH (FT)

ALTITUDE ABOVE SEA LEVEL (FT)	UNIT SIZE	TERMINATION TYPE	PIPE DIA (IN.)*	NUMBER OF 90° ELBOWS					
				1	2	3	4	5	6
0 to 2000	040-08 040-12	2 Pipe or 2-In. Concentric	1	5	NA	NA	NA	NA	NA
			1-1/2	70	70	65	60	60	55
			2	70	70	70	70	70	70
	060-08 060-12 060-16	2 Pipe or 2-In. Concentric	1-1/2	20	15	10	5	NA	NA
			2	70	70	70	70	70	70
			2-1/2	70	70	70	70	70	70
	080-12 080-16 080-20	2 Pipe or 2-In. Concentric	1-1/2	10	NA	NA	NA	NA	NA
			2	55	50	35	30	30	20
			2-1/2	70	70	70	70	70	70
	100-16 100-20	2 Pipe or 3-In. Concentric	2	5	NA	NA	NA	NA	NA
			2-1/2	40	30	20	20	10	NA
			3	70	70	70	70	70	70
2001 to 3000	120-20	2 Pipe or 3-In. Concentric	2-1/2 one disk	10	NA	NA	NA	NA	NA
			3†	45	40	35	30	25	20
			3† no disk	70	70	70	70	70	70
	140-20	2 Pipe or 3-In. Concentric	4† no disk	70	70	70	70	70	70
			2-1/2 one disk	5	NA	NA	NA	NA	NA
			3† one disk	40	35	30	25	20	15
	160-20	2 Pipe or 3-In. Concentric	3† no disk	60	56	52	48	44	40
			4† no disk	70	70	70	70	70	70
			1-1/2	67	62	57	52	52	47
3001 to 4000	180-20	2 Pipe or 3-In. Concentric	2	70	70	70	70	70	70
			1-1/2	17	12	7	NA	NA	NA
			2	70	67	66	61	61	61
	200-20	2 Pipe or 3-In. Concentric	2	49	44	30	25	25	15
			2-1/2	70	70	70	70	70	70
			2-1/2	35	26	16	16	6	NA
	220-20	2 Pipe or 3-In. Concentric	3	70	70	70	70	66	61
			3	14	9	NA	NA	NA	NA
			3† no disk	70	70	63	56	50	43
	240-20	2 Pipe or 3-In. Concentric	4† no disk	70	70	70	70	70	70
			3† one disk	20	15	10	5	NA	NA
			3† no disk	39	35	31	27	23	19
4001 to 5000†	260-20	2 Pipe or 3-In. Concentric	4† no disk	70	70	70	70	70	70
			1-1/2	64	59	54	49	48	43
			2	70	70	70	70	70	70
	280-20	2 Pipe or 2-In. Concentric	1-1/2	16	11	6	NA	NA	NA
			2	68	63	62	57	57	56
			2	46	41	28	23	22	13
	300-20	2 Pipe or 2-In. Concentric	2-1/2	70	70	70	70	70	70
			2-1/2	33	24	15	14	5	NA
			3	70	70	70	66	61	56
	320-20	2 Pipe or 3-In. Concentric	3† no disk	65	58	51	44	38	31
			4† no disk	70	70	70	70	70	70
			3† one disk	11	6	NA	NA	NA	NA
4001 to 5000†	340-20	2 Pipe or 3-In. Concentric	3† no disk	30	26	22	18	14	10
			4† no disk	70	70	70	70	70	70
			1-1/2	60	55	50	45	44	39
	360-20	2 Pipe or 2-In. Concentric	2	70	70	70	70	70	70
			1-1/2	15	10	5	NA	NA	NA
			2	64	59	58	53	52	52
	380-20	2 Pipe or 2-In. Concentric	2	44	39	26	21	20	11
			2-1/2	70	70	70	70	70	70
			2-1/2	31	22	13	12	NA	NA
4001 to 5000†	400-20	2 Pipe or 3-In. Concentric	3	70	70	67	62	57	52
			3† no disk	53	46	40	33	26	20
			4† no disk	70	70	70	70	70	70
	420-20	2 Pipe or 3-In. Concentric	3† no disk	21	17	13	9	5	NA
			4† no disk	69	64	59	54	49	44

See notes on pg. 15.

MAXIMUM ALLOWABLE PIPE LENGTH (FT) Continued

ALTITUDE ABOVE SEA LEVEL (FT)	UNIT SIZE	TERMINATION TYPE	PIPE DIA (IN.)*	NUMBER OF 90° ELBOWS					
				1	2	3	4	5	6
5001 to 6000‡	040-08	2 Pipe 2-In. Concentric	1-1/2	57	52	47	42	40	35
	040-12		2	70	70	70	70	70	70
	060-08	2 Pipe or 2-In. Concentric	1-1/2	14	9	NA	NA	NA	NA
	060-12		2	60	55	54	49	48	47
	060-16		2	41	36	23	18	17	8
	080-12	2 Pipe or 2-In. Concentric	2	70	70	70	70	70	70
	080-16		2-1/2	29	21	12	11	NA	NA
	080-20		3	70	67	62	57	52	47
	100-16	2 Pipe or 3-In Concentric	2-1/2	42	35	29	22	15	9
	100-20		3	70	70	70	70	70	70
6001 to 7000‡	120-20	2 Pipe or 3-In. Concentric	3† no disk	12	8	NA	NA	NA	NA
	140-20		4† no disk	42	37	32	27	22	17
	040-08	2 Pipe or 2-In. Concentric	1-1/2	53	48	43	38	37	32
	040-12		2	70	70	68	67	66	64
	060-08	2 Pipe or 2-In. Concentric	1-1/2	13	8	NA	NA	NA	NA
	060-12		2	57	52	50	45	44	43
	060-16		2	38	33	21	16	15	6
	080-12	2 Pipe or 2-In. Concentric	2	70	70	68	67	66	64
	080-16		2-1/2	27	19	10	9	NA	NA
	080-20		3	68	63	58	53	48	43
	100-16	2 Pipe or 3-In. Concentric	2-1/2	31	24	18	11	NA	NA
	100-20		4† no disk	70	70	70	70	67	62
7001 to 8000‡	120-20	2 Pipe or 3-In. Concentric	4† no disk	17	12	7	NA	NA	NA
	140-20		4† no disk	49	44	39	34	33	28
	040-08	2 Pipe or 2-In. Concentric	2	66	65	63	62	60	59
	040-12		1-1/2	12	7	NA	NA	NA	NA
	060-08	2 Pipe or 2-In. Concentric	2	53	48	46	41	40	38
	060-12		2	36	31	19	14	12	NA
	060-16		2 1/2	66	65	63	62	60	59
	080-12	2 Pipe or 2-In. Concentric	2-1/2	25	17	8	7	NA	NA
	080-16		3	63	58	53	48	43	38
	080-20		3† no disk	20	13	7	NA	NA	NA
	100-16	2 Pipe or 3-In. Concentric	4† no disk	61	56	51	46	41	36
	100-20		NA						
8001 to 9000‡	120-20	2 Pipe or 3-In. Concentric	1-1/2	46	41	36	31	29	24
	140-20		2	62	60	58	56	55	53
	040-08	2 Pipe or 2-In. Concentric	1-1/2	11	6	NA	NA	NA	NA
	040-12		2	49	44	42	37	35	34
	060-08	2 Pipe or 2-In. Concentric	2	33	28	17	12	10	NA
	060-12		2-1/2	62	60	58	56	55	53
	060-16		2-1/2	23	15	7	5	NA	NA
	080-12	2 Pipe or 2-In. Concentric	3	59	54	49	44	39	34
	080-16		3† no disk	10	NA	NA	NA	NA	NA
	080-20		4† no disk	35	30	25	20	15	10
	100-16	2 Pipe or 3-In. Concentric	140-20	NA					
	100-20		NA						
9001 to 10,000‡	120-20	2 Pipe or 2-In. Concentric	1-1/2	42	37	32	27	25	20
	140-20		2	57	55	53	51	49	47
	040-08	2 Pipe or 2-In. Concentric	2	45	40	38	33	31	29
	040-12		2	30	25	14	9	7	NA
	060-08	2 Pipe or 2-In. Concentric	2-1/2	57	55	53	51	49	47
	060-12		2-1/2	21	13	5	NA	NA	NA
	060-16		3	54	49	44	39	34	29
	080-12	2 Pipe or 2-In. Concentric	120-20	4† no disk	10	5	NA	NA	NA
	080-16		140-20	NA					
	080-20		NA						
	100-16	2 Pipe or 3-In. Concentric	100-20	NA					
	100-20		NA						
	120-20	2 Pipe or 3-In. Concentric	120-20	NA					
	140-20		NA						

* Disk usage—Unless otherwise specified, use perforated disk assembly (factory-supplied in loose parts bag). If 1 disk is stated, separate 2 halves of perforated disk assembly and use shouldered disk half. When using shouldered disk half, install screen side toward inlet box.

† Wide radius elbow.

‡ Vent sizing for Canadian installations over 4500 ft (1370m) above sea level are subject to acceptance by the local authorities having jurisdiction.

NA — Not Allowed; pressure switch will not make.

NOTES:

1. Do not use pipe size greater than those specified in table or incomplete combustion, flame disturbance, or flame sense lockout may occur.
2. Size both the combustion-air and vent pipe independently, then use the larger diameter for both pipes.
3. Assume two 45° elbows equal one 90° elbow. Long radius elbows are desirable and may be required in some cases.
4. Elbows and pipe sections within the furnace casing and at the vent termination should not be included in vent length or elbow count.
5. The minimum pipe length is 5 ft for all applications.
6. Use 3 in. diameter vent termination kit for installations requiring 4 in. diameter pipe.

**MAXIMUM ALLOWABLE EXPOSED VENT PIPE LENGTH (FT) WITH AND WITHOUT INSULATION
IN WINTER DESIGN TEMPERATURE AMBIENT***

UNIT SIZE	WINTER DESIGN TEMPERATURE (°F)	MAX PIPE DIAMETER (IN.)	WITHOUT INSULATION	WITH 3/8-IN. OR THICKER INSULATION†
040-08 040-12	20	1-1/2	51	70
	0	1-1/2	28	70
	-20	1-1/2	16	70
060-08 060-12 060-16	20	2	65	70
	0	2	35	70
	-20	2	20	70
080-12 080-16 080-20	20	2-1/2	70	70
	0	2-1/2	47	70
	-20	2-1/2	28	70
100-16 100-20	20	3	70	70
	0	3	50	70
	-20	3	28	70
120-20	20	4	70	70
	0	4	48	70
	-20	4	23	70
140-20	20	4	70	70
	0	4	57	70
	-20	4	30	70

* Pipe length (ft) specified for maximum vent pipe lengths located in unconditioned spaces. Vent pipes located in unconditioned space cannot exceed the total allowable pipe length as specified in Maximum Allowable Pipe Length table.

† Insulation thickness based on R value of 3.5 per in.

Electrical data

UNIT SIZE	040-08	040-12	060-08	060-12	060-16	080-12	080-16	080-20	100-16	100-20	120-20	140-20
UNIT VOLTS — HERTZ — PHASE									115—60—1			
OPERATING VOLTAGE RANGE (Min — Max)*									104—127			
MAXIMUM UNIT AMPS	6.1	7.3	6.1	7.1	9.5	7.6	10.0	14.1	10.2	14.8	14.6	14.3
UNIT AMPACITY†	8.4	10.0	8.4	9.8	12.8	10.4	13.4	18.4	13.5	19.3	19.1	18.8
MINIMUM WIRE SIZE	14	14	14	14	14	14	14	12	14	12	12	12
MAXIMUM WIRE LENGTH (Ft)‡	44	37	44	38	29	36	28	31	27	30	30	30
MAXIMUM FUSE OR CKT BKR (Amps)**	15	15	15	15	15	15	15	20	15	20	20	20
TRANSFORMER (24v)								40va				
EXTERNAL CONTROL POWER AVAILABLE	Heating								12va			
	Cooling								21va			
AIR CONDITIONING BLOWER RELAY									Standard			

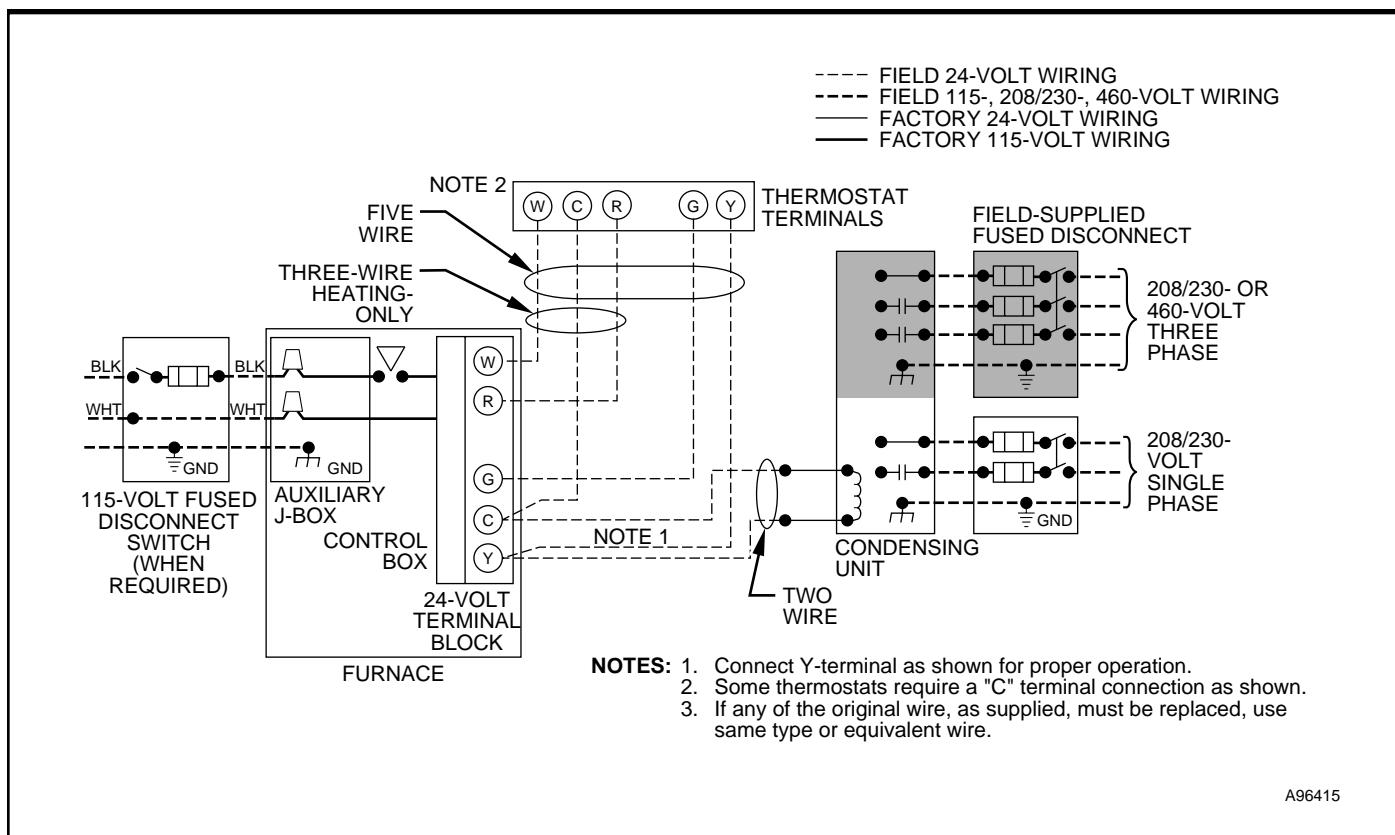
* Permissible limits of the voltage range at which unit will operate satisfactorily.

† Unit ampacity = 125% of largest operating component's full load amps plus 100% of all other potential operating components' (EAC, humidifier, etc.) full load amps.

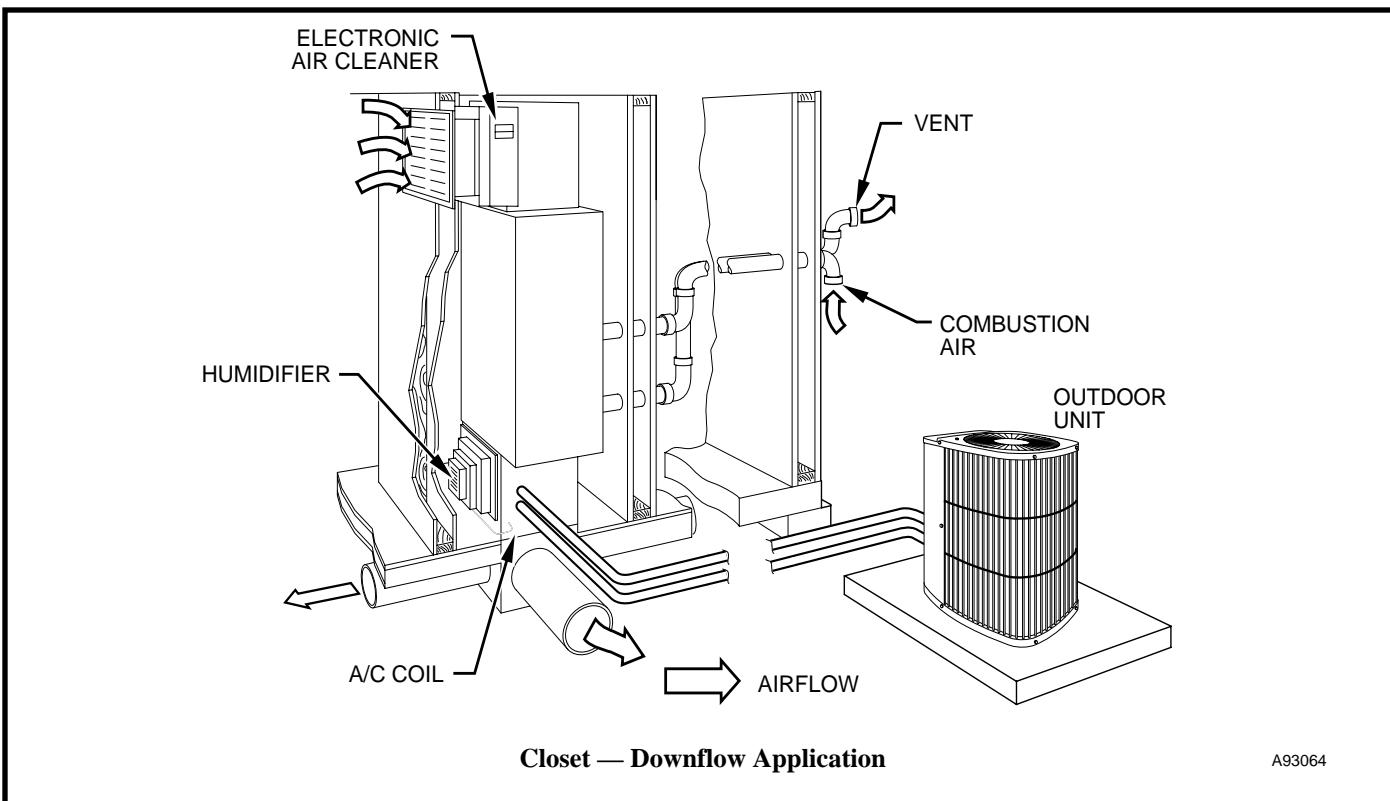
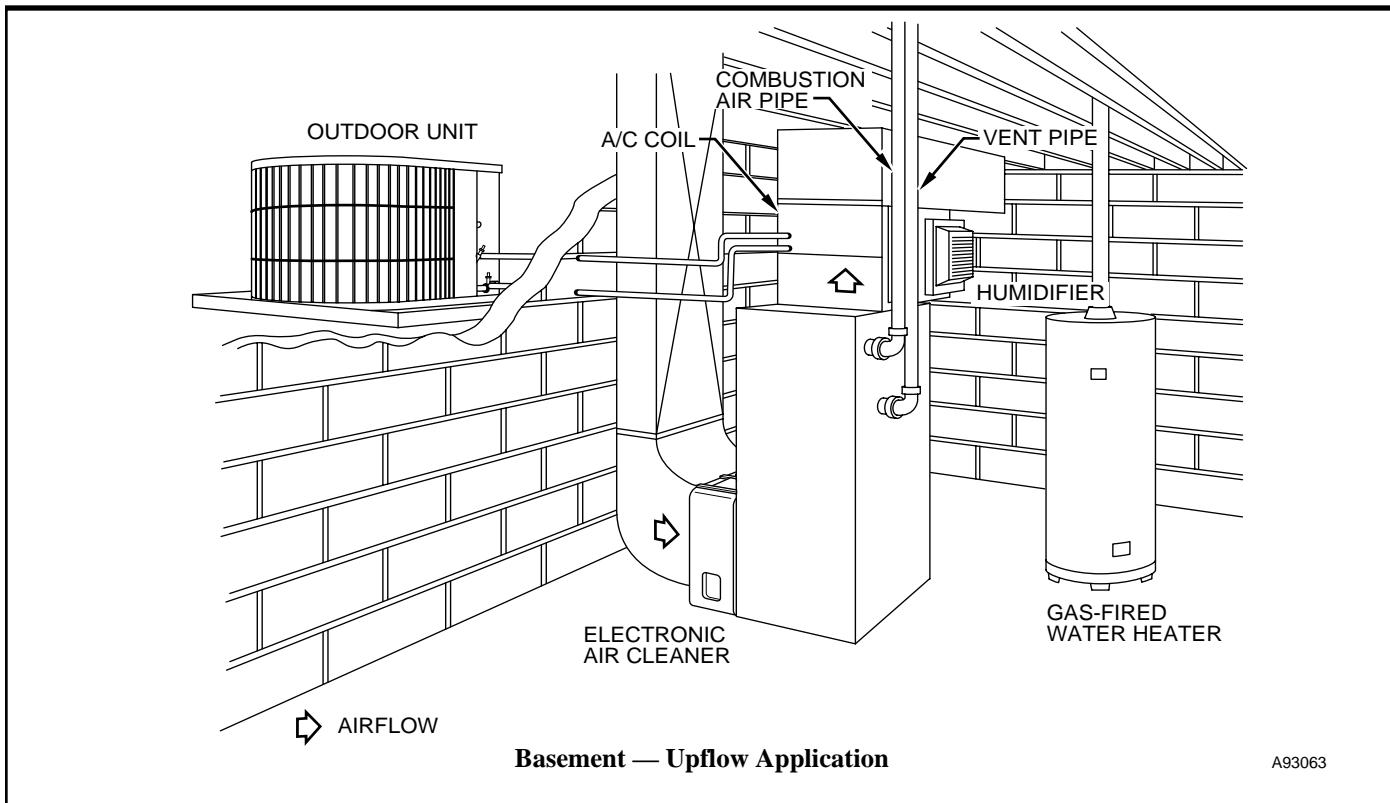
‡ Length is as measured 1 way along wire path between unit and service panel for maximum 2% voltage drop.

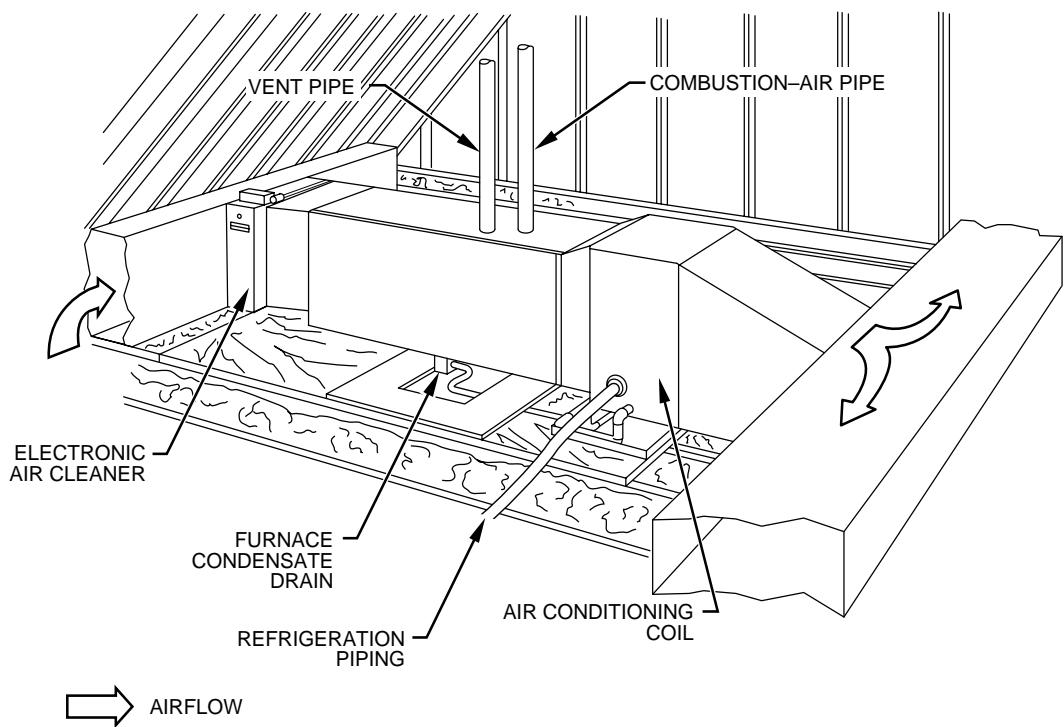
** Time-delay type is recommended.

Typical wiring schematic



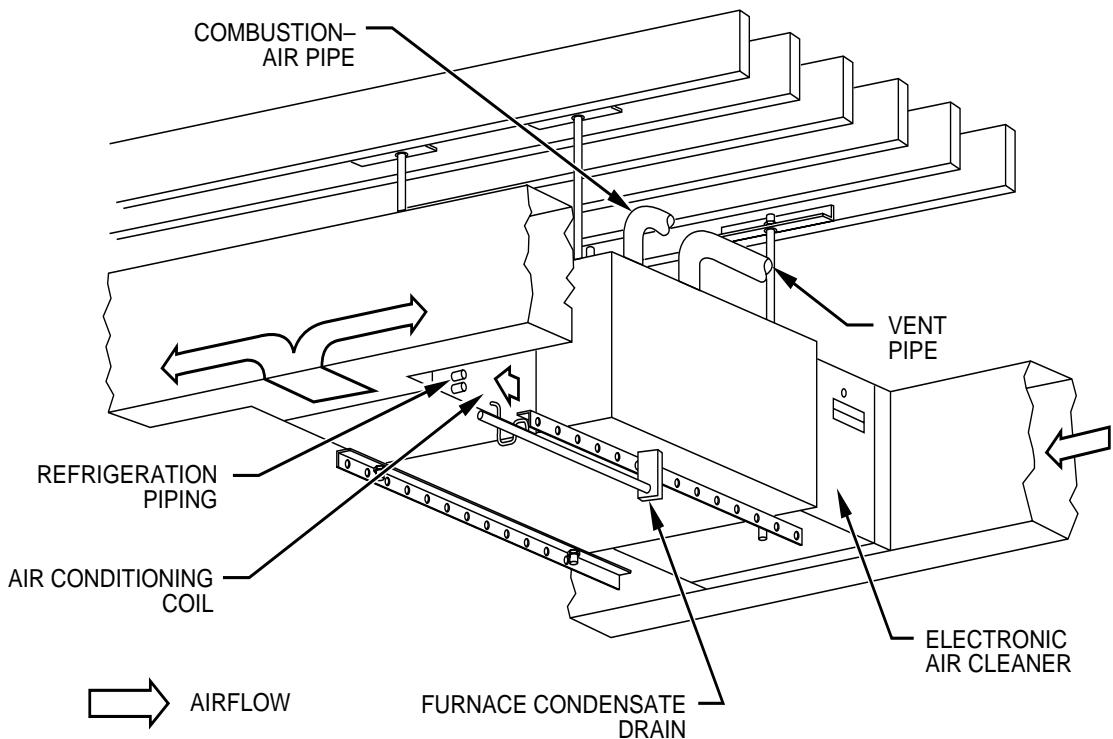
Typical installations





A93065

Attic — Horizontal Application



A93066

Crawlspace — Horizontal Application



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Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.

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PC 101

Form 58Mxa-9pd
Replaces: 58Mxa-8pd